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Code: 5000-72138

JAPANESE PATENT OFFICE
PATENT JOURNAL
KOKAI PATENT APPLICATION NO. SHO 61[1986]-218510

Int. Cl.[4]:	A 61 K 7/06
Sequence Nos. for Office Use:	7417-4C
Application No.:	Sho 60[1985]-58094
Application Date:	March 22, 1985
Publication Date:	September 29, 1986
No. of Inventions:	1 (Total of 2 pages)
Examination Request:	Not requested

HAIR COSMETIC

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Claim

A hair cosmetic, characterized by containing prostaglandin E_1 and/or prostaglandin I_2.

Detailed explanation of the invention

This invention pertains to a hair cosmetic. In particular, it pertains to a trichogen containing prostaglandin (abbreviated to PG, below) especially PGE_1 and/or PGI_2 and having a trichogenous action.

PG is present inside the body in a trace amount, [and is] known to have various physiological activities and is classified further into varieties. In the clinical fields, $PGF_{2\alpha}$ and PGE_2 are used for inducing labor during the terminal period of pregnancy; PGE_1 is used in chronic arterial clogging, they are safe compounds (LD_{50} of PGE_1 in mouse is 21 mg/kg), and various clinical applications have been studied for other kinds of PG.

The inventors of this invention studied PG diligently, as a result they found that PGE_1 and PGI_2 (called compounds of this invention) among various kinds of PG used alone or as a mixture had an excellent trichogenous effect, and they arrived at this invention.

Specifically, the compounds of this invention are prepared in a suitable topical application formulation, applied to patients with alopecia to examine the trichogenous effects, and as a result, the effects were confirmed to be excellent.

To prepare the trichogen of this invention, 0.5-10 μg/mL, preferably 1-3 μg/mL of the compounds of this invention are used to prepare a topical application formulation. As a formulation type, any conventional topical formulation types may be used, but considering transdermal absorption, alcohol lotions (30-90% ethanol solution), aqueous solutions, o/w-type creams, etc., are preferably usable, and with respect to the stability of the major component, the use of an alcohol lotion adjusted to pH 5-7 is especially desirable.

The trichogen prepared as described above is applied to a diseased site several times a day to observe the trichogenous effects.

This invention is explained further in detail by using application examples as follows.

Application Example 1

200 μg PGE_1 were dissolved in 60 mL ethyl alcohol and 40 mL purified water to obtain an alcohol lotion.

Application Example 2

PGE_1	300 μg
Stearic acid	10 g
Stearyl alcohol	5 g
Glycerol monostearate	2 g
Butylene glycol	15 g
Potassium hydroxide	0.5 g

Purified water	67.5 g

With the above prescription, an o/w-type cream was prepared.

Application Example 3

A solution prepared by dissolving PGE_1 in a physiological saline solution at a concentration of 2 μg/mL was topically applied 2 times a day in the amount of 0.5 mL each to a diseased site of a 52-year-old male patient (adult alopecia). After 2 months, trichogenous effects were observed, and terminal hair formation was observed after 3 months.

Application Example 4

A solution prepared by dissolving PGE_1 in a 50% ethanol solution at a concentration of 2 μg/mL was topically applied 2 times a day in the amount of 0.5 mL each to a diseased site of a 45-year-old male patient (alopecia areata). After 1-2 weeks, the extent of hair loss was reduced; trichogenous effects were observed after 1 month; after 2 months, terminal hair formation was observed, and after 3 months, the patient was completely cured.

Application Example 4 [sic]

A solution prepared by dissolving PGI_2 in a 50% ethanol solution at a concentration of 1 μg/mL was topically applied 2 times a day in the amount of 0.5 mL each to a diseased site of a 37-year-old male patient (alopecia areata). After 1 month, trichogenous effects were observed; terminal hair formation was observed after 2 months, and the patient was completely cured after 4 months.

Application Example 5

A solution prepared by dissolving PGI_2 in a 50% physiological saline solution at a concentration of 2 μg/mL was topically applied 3 times a day in the amount of 0.5 mL each to a diseased site of a 51-year-old male patient (adult alopecia). After about 2 months, trichogenous effects were observed, and terminal hair formation was observed after 4 months.